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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/520,945

11/04/2005

Martin Weston

P-7600-US

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EXAMINER

KOSTAK, VICTOR R

ART UNIT

PAPER NUMBER

2622

MAIL DATE

DELIVERY MODE

09/29/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/520,945	Applicant(s) WESTON ET AL.	
	Examiner Victor Kostak	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22-34 is/are allowed.
- 6) ☒ Claim(s) 1-4, 9-11, 20 and 21 is/are rejected.
- 7) ☒ Claim(s) 5-8 and 12-19 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

Art Unit: 2622

1. The amended title of the invention is still not descriptive enough. A new title is required that is clearly indicative of the invention to which the claims are directed. See MPEP 606.01.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 9-11, 20 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by May (6,067,125) cited by applicant.

May (Fig. 1) applies both spatial and temporal filtering to an input video signal, wherein the spatial filtering is a recursive process (e.g. col. 5 lines 4-32 describing a Wiener filter which is recursive) and the temporal non-recursive.

The input video signal is decompose into spatial frequencies (not shown: discussed in col. 4 lines 20-25 covering luma and chroma bands: also MPEG processing which covers DCT frequency transform components discussed in col. 1 lines 25-37).

Non-linear processing is applied to the filtering (e.g. col. 3 line 66 – col. 4 line 7), thereby meeting claim 1.

As for claim 2, the non-linear processing is ultimately based on the magnitude (or amplitude, intensity) of the video signal being processed.

As for claim 4, the frequency bands (as an MPEG formatted video signal being processed into blocks of DCT transforms) is characterized by plural low to high bands in block units (i.e. two-dimensional bands).

Art Unit: 2622

Regarding claim 9, the recursive processing (done by stage 102) is subsequently processed according to motion compensation (e.g. col. 2 lines 43-51).

As for claim 10, both the spatial and temporal filtering is applied to the DCT-transformed blocks of video as an MPEG signal which plural blocks (typically 8 x 8 pixel units square) comprise different spatial frequency bands. Also, luma and dual chroma signals also are characterized by different frequency bands, and the combining filter 102 is recursive (a temporal IIR filter, which is recursive, can also be used: col. 3 lines 44-55). The signals which comprise plural blocks of different bands from stages 102 and 101 are combined, which 8 x 8 blocks go beyond at least three in forming each frame of video, thereby meeting claim 10.

Considering claim 11, the temporal (non-recursive) and spatial (recursive) filtering is combined at stage 104.

As for claims 20 and 21, the filtering as a function of detected motion, as discussed above (again col. 2 lines 43-51), which can be considered adaptive to motion or which compensates for motion.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over May.

It would have been obvious to one of ordinary skill in the art to consider the non-linear processing as instantaneously gain dependent on instantaneous amplitude because the video

Art Unit: 2622

sequence is compensated for on a continuous real-time basis where the imagery is modified (on the amplitude parameter) the instant the filtering is applied.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

5. Claims 5-8, 12-19 and 22-34 appear allowable over the prior art.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor Kostak whose telephone number is (571)272-7348. The examiner can normally be reached on 6:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (571) 272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any response to this action should be mailed to:

Art Unit: 2622

Commissioner of Patents and Trademarks
P.O. Box 1450
Alexandria, Virginia 22313-1450

Or faxed to:

(571) 273-8300

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Customer Service Office whose telephone number is (703) 308-HELP.

/Victor R. Kostak/
Primary Examiner
Art Unit 2622

VRK